

CLAIMS

1. A non-slip device for personal use items, comprising a body (20) of elastomeric material with a first side that can be coupled to a surface (10) of a personal use item (1), and a second side opposite to the first one and provided with non-slip properties, characterized by the fact that said body comprises a flattened band (21), said band (21) being formed such that once it is adhered to the surface (10) of the personal use item, it defines on said surface (10) at least one surface section (11) intended for optionally housing an auxiliary element (3), said surface section (11) being at least partially surrounded by the band (21).

2. A non-slip device according to claim 1, characterized by the fact that said band (21) has a substantially uniform width.

3. A non-slip device according to claims 1 or 2, characterized by the fact that said band (21) forms a closed figure, completely surrounding the surface section (11) of the personal use item (1).

4. A non-slip device according to any of the previous claims, characterized by the fact that said second side of the body (20) has a plurality of projections (22) forming one piece with the body (20).

5. A non-slip device according to any of the previous claims, characterized by the fact that it comprises means (4) of coupling said first side of the body (20) to the surface (10) of the personal use item.

6. A non-slip device according to claim 5, characterized by the fact that said means of coupling comprise a strip (4) which is self-adhesive on at least one side and is protected by a removable sheet.

7. A non-slip device according to claim 6, characterized by the fact that said strip (4) has a shape that is substantially identical to that of the band (21).

8. A non-slip device according to claim 6, characterized

by the fact that said strip (4) encompasses both the band (21) and the surface section (11) of the personal use item which is surrounded by said band (21).

9. A non-slip device according to any of claims 6 to 8, characterized by the fact that said strip (4) is self-adhesive on both sides.

10. A non-slip device according to claim 9, characterized by the fact that said strip (4) has areas with different adhesive properties.

11. A non-slip device according to any of the previous claims, characterized by the fact that associated thereto there is at least one auxiliary element (3) which is housed in the surface section (11) of the personal use item which is surrounded by the band (21), said auxiliary element (3) being chosen from printed decorative or informative images, electronic components, advertising objects and lighting, acoustic or measurement elements.

12. A non-slip device according to claim 11, characterized by the fact that said auxiliary element (3) has a coating (32).

13. A non-slip device according to claim 12, characterized by the fact that the coating (32) for the auxiliary object (3) in turn has non-slip properties.

14. A non-slip device according to claim 8 and any of claims 11 to 13, characterized by the fact that the auxiliary element (3) is coupled on the strip (4) in the surface section (11) of the personal use item (1) that is surrounded by the band (21).

15. A non-slip device according to the previous claims, characterized in that it is incorporated to the personal use item such that it is part of the support surface of said item in a non-removable manner.

16. A manufacturing process for a non-slip device for personal use items as claimed in the previous claims, of the type by means of underwater injection molding without using a

roller, including the following steps:

- closing the injection machine press with the molds inside,
- introducing in the screw device the thermoplastic material in pellet form through a respective feed hopper with the desired coloring material,
- heating the cylinder of the screw device to cause the melting of the introduced material,
- making the screw device rotate at a high speed with a low counter-pressure in order to introduce the material into the injection machine press until filling the corresponding molds,
- leaving the material introduced in the press to cool as a result of the cooling action of the fluid circulating through the inside of the press,
- opening the press and subsequently the molds inside, and actuating the ejectors in combination with driving means of the bottom of the impression so as to drag the parts by gravity to a corresponding collection hopper, and
- expelling the cold casting pieces.

characterized in that a single sheet or strip of non-slip material is obtained which is subsequently die-cut in order to obtain the non-slip devices with an internal cavity.

17. A manufacturing process for a non-slip device for personal use items according to claim 16, characterized in that the dimensions of the obtained strip or sheet are larger than the dimensions of the non-slip device to be die-cut and obtained.